

Title (en)  
ANTENNA DEVICE

Title (de)  
ANTENNENVORRICHTUNG

Title (fr)  
DISPOSITIF D'ANTENNE

Publication  
**EP 4075599 A4 20230104 (EN)**

Application  
**EP 20899733 A 20201208**

Priority  
• JP 2019223946 A 20191211  
• JP 2020045588 W 20201208

Abstract (en)  
[origin: EP4075599A1] An antenna device includes: a feeding element having a feedpoint that a signal in a first frequency band and a signal in a second frequency band lower than the first frequency band are supplied to; a high-band element connected to the feeding element, the high-band element resonating with the signal in the first frequency band; a low-band element connected to the feeding element, the low-band element resonating with the signal in the second frequency band; an auxiliary element capacitively coupled to the low-band element at an open end of the low-band element; a ground member grounded; and a switch switching a conductive state and a non-conductive state between the ground member and the auxiliary element.

IPC 8 full level  
**H01Q 9/42** (2006.01); **H01Q 1/22** (2006.01); **H01Q 5/371** (2015.01); **H01Q 5/385** (2015.01)

CPC (source: EP US)  
**H01Q 1/2266** (2013.01 - EP); **H01Q 5/364** (2015.01 - US); **H01Q 5/371** (2015.01 - EP); **H01Q 5/385** (2015.01 - EP); **H01Q 7/00** (2013.01 - US); **H01Q 9/30** (2013.01 - US); **H01Q 9/42** (2013.01 - EP)

Citation (search report)  
• [XYI] US 2013154888 A1 20130620 - LIN HSIAO-YI [TW], et al  
• [X] US 2013122828 A1 20130516 - CHOI CHANG RYUL [KR]  
• [Y] US 2018277951 A1 20180927 - NISHIKAWA KENJI [JP], et al  
• See references of WO 2021117699A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**EP 4075599 A1 20221019**; **EP 4075599 A4 20230104**; CN 114762190 A 20220715; JP WO2021117699 A1 20210617; US 2022302589 A1 20220922; WO 2021117699 A1 20210617

DOCDB simple family (application)  
**EP 20899733 A 20201208**; CN 202080084703 A 20201208; JP 2020045588 W 20201208; JP 2021563961 A 20201208; US 202217831973 A 20220603